Women's height age or age height index and risk of cesarean delivery

Sir,

Women's stature has been studied extensively as a predictor of mode of delivery. Short stature of women has shown to be associated with increased risk of cesarean section.[1] However, controversy exists on such association. Mahmood et al[2] in their study cohort of 563 women, noted that 80% of the women with height less that 160 cm delivered vaginally. Similarly, Moller et al[3] suggested the role of regional variation among the women's height, in predicting the risk for cesarian section.

Women's age has also been implicated in influencing the route of delivery. Increased risk of cesarean section with advanced maternal age has been shown.[4-6] As evident from the epidemiological studies that the variation in the range of women's height for any population is small, as compared to wide range of women's reproductive age.

To evaluate the impact of these two variables (height and age) on mode of delivery, a combination of these factors is needed. We established two indices, which included both factors (height and age), the height age index and age height index. We conducted this study to look at these factors in predicting the mode of delivery.

A total of 96 deliveries were reviewed, 48 with spontaneous vaginal delivery and 48 with cesarean section. Only primiparous women were included in the study. Charts were reviewed with respect to women's height, age and mode of delivery. The women's height age index was calculated as: height in cm divided by age in years (cm/year) while age height index by dividing age by height (year/cm). Variables are compared by using t-test, with the help of Statistical Package for the Social Sciences (Windows version 6.1), SPSS Inc, Chicago, Illinois.

Table 1 - Summary of the results.

Mode of delivery	Vaginal delivery	Cesarean section	P-value
Cases(n)	48	48	
Women's age height index (year/cm)	0.13±0.02	0.14±0.02	p=0.01*
Women's height age index (cm/year)	7.1±1.06	6.6±0.86	p=0.02*
Results expressed as mean±standard deviation *p<0.05 was taken as statistical significant			

The results are depicted in Table 1. We were able to demonstrate a statistically significant lower height age index and higher age height index in women who had cesarean sections as compared to the women who had vaginal deliveries. That suggested that these indices might be used, in addition to age or height alone, in predicting the risk of cesarean section in primiparous women.

Shabih Manzar
Division of Neonatology/Perinatology
Sultan Qaboos University Hospital
PO Box 38
Postal Code 123
Al-Khoud
Muscat
Sultanate of Oman

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